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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,386	12/23/2003	Masahiko Matsukawa	21581-00313-US	7939

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EXAMINER	
ZHENG, LOIS L	
ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,386	MATSUKAWA ET AL.	
	Examiner	Art Unit	
	Lois Zheng	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,10,11,13,14 and 16-23* is/are pending in the application.

4a) Of the above claim(s) *6,7 and 16-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,10,11,13,14 and 19-22* is/are rejected.

7)☒ Claim(s) *23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claim 1 is amended in view of the amendment filed 12 September 2006. New claims 21-23 are added in view of the amendment. Claims 2, 8-9, 12 and 15 are canceled in view of the amendment. Claims 6-7 and 16-18 remain withdrawn as they are drawn to non-elected invention. Therefore, claims 1, 3-5, 10-11, 13-14 and 19-23 are currently under examination.

Status of Previous Rejections

2. Applicant's arguments, filed 12 September, with respect to Carey et al. US 6,607,610 B1 are persuasive. Therefore, the rejections of claims 1-5, 8-14 and 19-20 based on Carey are withdrawn.

Claim Objections

3. Claims 11 and 19 are objected to because of the following informalities: Claims 11 and 19 depend on canceled claims 8 and 9. Appropriate correction is required.

The examiner has not rejected instant claims 11 and 19 since it is not obvious to the examiner the potential amendment or cancellation applicant would like to make to correct this objection. However, the merits of claims 11 and 19 would have been similarly rejected for the same reasons as stated in the rejection of claims 4-5 below.

Terminal Disclaimer

4. The terminal disclaimer filed on 12 September 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the

expiration date of 10/743,390 has been reviewed and is accepted. The terminal disclaimer has been recorded.

5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartwig et al. International Application WO 02/090619 A2.

Since WO 02/090619 A2 is in German, the examiner relies on corresponding US. Patent Application Publication 2004/0168748 A1(Hartwig) for establishing the rejection ground.

Hartwig teaches a metal surface treatment coating composition comprising zirconium, titanium, fluorine and an organic base such as polyvinylamine(page 2 paragraph [0024]).

Therefore, Hartwig's coating composition anticipates the coating composition as recited in instant claims 1-2.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by WO 03/56062.

Since WO 03/56062 is not published in English, the examiner is relying on the equivalent teachings from Gonzalez et al. US 2005/0126427 A1(Gonzalez) to formulate the rejection grounds. Gonzalez is the national stage application for WO 03/56062.

Gonzalez teaches a metal surface coating solution comprising polyvinylamine resins(page 2 paragraph [0034], page 3 paragraphs[0037-0039]) and fluorometallates of Ti, Zr and/or Hf(page 6, paragraph [0077]).

Therefore, Gozalez anticipates the instant claim 1.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hartwig et al. International Application WO 02/090619 A2.

Since WO 02/090619 A2 is in German, the examiner relies on corresponding US. Patent Application Publication 2004/0168748 A1(Hartwig) for establishing the rejection ground.

Hartwig teaches a metal surface treatment coating composition comprising zirconium, titanium, fluorine and an organic base such as polyvinylamine(page 2 paragraph [0024]).

Therefore, Hartwig's coating composition anticipates the coating composition as recited in instant claim 1.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3-4, 10 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/56062.

The teachings of Gonzalez are discussed in paragraph 7 above.

Regarding claims 3-4 and 21-22, even though Gonzalez does not explicitly teach the claimed polyvinylamine molecular weight of 500 to 500,000, one of ordinary skill in the art would have found the claimed molecular weight obvious absent of factual evidence data demonstrating the significance of the claimed molecular weight range, since the claimed polyvinylamine resins having a molecular weight of 500 to 500,000 carry the substantially the same properties as the polyvinylamine resins of Gonzalez.

In addition, the concentration of the polyvinylamine resin(i.e. 0.01-400g/l) as taught by Gonzalez(page 5 paragraph [0059]) overlaps the claimed water soluble resin concentration of 5-5000ppm. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin concentration range from the disclosed polyvinylamine concentration range of Gonzalez would have been obvious to one skilled in the art since Gonzalez teaches the same utilities in its disclosed polyvinylamine concentration range.

Regarding claim 10, Gonzalez further teaches the presence of Fe in an amount of 0.01-100g/l in the coating solution(page 6 paragraph [0086]), which reads on the claimed accelerator. The concentration of Fe as taught by Gonzalez overlaps the claimed accelerator concentration of 1-5000ppm. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed accelerator concentration range from the disclosed Fe concentration range of Gonzalez would have

been obvious to one skilled in the art since Gonzalez teaches the same utilities in its disclosed Fe concentration range.

11. Claims 1, 3-5, 10, 13-14 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauser et al. US 6,312,812 B1(Hauser) in view of WO 03/56062.

Hauser teaches a metal surface coating solution comprising zirconium, titanium, fluorine(col. 5 lines 4-15) and a water soluble resin such as primary alkanolamine(col. 10 lines 28-39).

However, Hauser does not teach that the water soluble resin is the claimed polyvinylamine resin.

Gonzalez teaches a metal surface coating solution comprising polyvinylamine resins(page 2 paragraph [0034], page 3 paragraphs[0037-0039]) in the amount of 0.01-400g/l(page 5, paragraph [0059].

Regarding claim 1, it would have been obvious to one of ordinary skill in the art to have incorporated resins such as 0.01-400 g/l of polyvinylamine resins as taught by Gonzalez into the coating solution of Hauser in order to improve corrosion inhibition and subsequent film adhesion as taught by Gonzalez(page 1, paragraph [0015]).

Regarding claim 3 and new claims 21-22, even though Hauser in view of Gonzalez do not explicitly teach the claimed polyvinylamine molecular weight of 500 to 500,000, one of ordinary skill in the art would have found the claimed molecular weight obvious absent of factual evidence data demonstrating the significance of the claimed molecular weight range, since the claimed polyvinylamine resins having a molecular

weight of 500 to 500,000 carry the substantially the same properties as the polyvinylamine resins of Hauser in view of Gonzalez.

In addition, the concentration of the polyvinylamine resin as taught by Hauser in view of Gonzalez overlaps the claimed water soluble resin concentration of 5-5000ppm. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed water soluble resin concentration range from the disclosed polyvinylamine concentration range of Hauser in view of Gonzalez would have been obvious to one skilled in the art since Hauser in view of Gonzalez teach the same utilities in their disclosed polyvinylamine concentration range.

Regarding claim 4 and 10, Hauser further teaches the addition of citric acid for adjusting the pH of the coating solution. Even though Hauser does not explicitly teach the claimed citric acid concentration, one of ordinary skill in the art would have found it obvious to have routinely optimize the concentration of the citric acid in order to maintain the pH value of the coating solution within the desired range.

Regarding claim 5, Hauser further teaches that the zirconium containing material has a concentration of upto about 10,000ppm(col. 5 lines 21-23) and the pH of the coating solution is about 2.0 to about 7.0(col. 5 lines 25-26), which overlap the claimed zirconium concentration of 20-10,000ppm and the claimed pH of 1.5-6.5. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed zirconium concentration and coating solution pH ranges from the disclosed ranges of Hasuer would have been obvious to one skilled in the art since Hauser teaches the same utilities in its' disclosed zirconium concentration and coating solution pH ranges.

Regarding claims 13-14 and 20, the instant claims are rejected for the same reasons as sated in the rejection of instant claim 5 above.

Allowable Subject Matter

12. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach or fairly suggest, either alone or in combination, the claimed conversion coating agent comprising fluorine, at least one kind selected from the group consisting of Zr, Ti and Hf, and a water-soluble resin with the claimed structure, wherein the water soluble resin is a polyallylamine resin.

Response to Arguments

14. Applicant's arguments filed 23 October 2006, have been considered but are partially moot in view of the new grounds of rejection.

In the remarks, applicant further argues that Hartwig does not anticipate instant claim 1 since Hartwig discloses an addition product of hexafluorotitanic acid and polyvinylamine.

The examiner does not find applicant's argument persuasive since applicant's argument is not commensurate with the scope of the instant claims. The instant claim only recites the ingredients of a chemical agent, and does not restrict the ingredients to those that do not react with each other. Hartwig teaches a chemical agent with the

claimed ingredients. The mere fact that the ingredients react with each other to form another product as disclosed by Hartwig is irrelevant. Therefore, the examiner maintains the position that Hartwig anticipates instant claim 1.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

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